



FINAL

# Operational Range Assessment Program Phase I Qualitative Assessment Report Stead Training Site, Nevada

U.S. Army Operational Range Assessment Program  
Qualitative Operational Range Assessments

Prepared for:

U.S. Army Environmental Command and  
U.S. Army Corps of Engineers Baltimore District



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## ABBREVIATIONS/ACRONYMS

AFB	Air Force Base
ARID-GEO	Army Range Inventory Database-Geodatabase
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	Conceptual Site Model
DoD	Department of Defense
DODI	Department of Defense Instruction
DRI	Desert Research Institute
E	Ecological receptors identified. (This refers to range grouping; pathway designation always precedes E designation.)
GW	Groundwater pathway identified. (This refers to range grouping; M designation always precedes GW designation.)
H	Human receptors identified. (This refers to range grouping; pathway designation always precedes H designation.)
LS	Limited Source
M	Munitions used. (This refers to range grouping; M designation always precedes applicable pathway.)
MCOC	Munitions Constituents of Concern
NDWR	State of Nevada Division of Water Resources
NRCS	Natural Resources Conservation Service
NVARNG	Nevada Army National Guard
ORAP	Operational Range Assessment Program
PU	Pathway unlikely or incomplete. (This refers to range grouping; M designation always precedes PU designation.)
RAAB	Reno Army Air Base
SW	Surface water pathway identified. (This refers to range grouping; M designation always precedes SW designation.)
U.S.	United States
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEC	United States Army Environmental Command
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
°F	Degrees Fahrenheit

## EXECUTIVE SUMMARY

The United States (U.S.) Army is conducting qualitative assessments at operational ranges to meet the requirements of Department of Defense policy and to support the U.S. Army Sustainable Range Program. The operational range qualitative assessment (hereinafter referred to as Phase I Assessment) is the first phase of the U.S. Army Operational Range Assessment Program (ORAP). This Phase I Assessment evaluates the operational range area at Stead Training Site to assess whether further investigation is needed to determine if potential munitions constituents of concern (MCOC) are or could be migrating off-range at levels that may pose an unacceptable risk to human health or the environment. In conducting the Phase I Assessment, MCOC sources, potential off-range migration pathways, and potential off-range human and ecological receptors are evaluated as appropriate.

Stead Training Site is located in Washoe County in northern Reno, Nevada. The site provides classroom training facilities and a training area for the Nevada Army National Guard (NVARNG) (2001) and various civilian organizations (Army Range Inventory Database-Geodatabase [ARID-GEO], 2007). Stead Training Site consists of two parcels of land which occupy approximately 366.55 acres (ARID-GEO, 2007). The smaller of the two parcels is used as the NVARNG's Regional Training Institute, a classroom facility used for professional development training. The larger parcel is the operational range, consisting of 196.56 acres. It is used for such activities as driver training on existing roads, land navigation, and defensive perimeter training. The operational range is utilized for 12 days of formal training and 60 days of incidental use per year (NVARNG, 2001).

Currently, no munitions of any kind (live-fire or non-live-fire) are used on Stead Training Site. Historical small caliber munitions use is associated with an inactive small arms range located in the north portion of the operational range area. The firing range was used by the Air Force between 1951 and 1955 and by the NVARNG during 1991 and 1992. Use of the range was discontinued due to noise, encroachment of area development, and proximity to the Reno Stead Airport runway.

MCOC from the primary source area potentially impact soil. Although small caliber munitions were historically used on a portion of the operational range area, the migration of on-range MCOC to off-range receptors, at a level which may negatively impact human health or the environment, is unlikely based on limited precipitation, high evapotranspiration, and subsurface soils comprised of silt, clay, and fine sands, which indicate low permeability and low hydraulic conductivity of the surficial aquifer. While unlikely, MCOC from the primary source area could possibly leach/infiltrate into shallow groundwater through subsurface soils, and have the potential to migrate to off-range ecological receptors. A confining clay layer, further limiting potential migration, is present between the surficial aquifer and the East Lemmon Valley hydrologic basin, which is used as the source of potable water. Consequently, the operational range at Stead Training Site is categorized as Unlikely.

### **Unlikely – Five-Year Review**

One range at Stead Training Site is categorized as Unlikely, totaling 196.56 acres. Ranges where, based upon a review of readily available information, there is sufficient evidence to show that there are no known releases or source-receptor interactions off-range that could present an unacceptable risk to human health or the environment are categorized as Unlikely. Ranges categorized as Unlikely are required to be re-evaluated at least every five years. Re-evaluation may occur sooner if significant changes (e.g., change in range operations or site conditions, regulatory changes) occur that affect determinations made during this Phase I Assessment. **Table ES-1** summarizes the Phase I Assessment findings.

**Table ES-1: Summary of Findings and Conclusions for Stead Training Site**

Category	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	1 operational range; 196.56 acres	Inactive small arms range and impact berms located in northern portion of operational range area	Shallow groundwater aquifer	None	Swan Lake Marsh protected wetlands environment and wildlife refuge area	Re-evaluate during the five-year review. It is unlikely that enough MCOC is present in source material to impact off-site receptors at an unacceptable level.